

## New Books.

*Tables for Estimating the Contents in Cubic Yards of the Earthwork of Railways and other Public Works.* By CHARLES K. STICKLEY, C.E., and WILLIAM RUTHKENSFORD, of the Royal Academy, Woolwich. London, Longman and Co., 1847.

WHAT we to judge of the importance of any particular subject by the number of works on it that issue from the press, we should be induced to assign a high place to the estimation of the quantity of earthwork in railway cuttings and embankments. During the present year, so far as it has yet passed over us, no fewer than five different productions of this class have been given to the world, and all of them for the ostensible purpose of facilitating the calculations of the prismoid, a geometrical figure which admits of a very simple and elegant analytical expression, involving in its reduction not the slightest difficulty.

Of these, two are very costly and elaborate performances; the other three are more condensed, being confined to a few concise tablets calculated to embrace the usual range of practical appliances, and to exclude every thing that is not absolutely necessary.

Of the latter, the work now before us is in our opinion the most meritorious, and the best adapted for the intended purpose: it consists of three principal tables, and one subsidiary one; the principals are computed to depths of cutting and heights of embankment, from zero up to sixty feet, at intervals of half a foot, thus precluding any error exceeding three inches, either in excess or defect. The numbers themselves have been computed to three places of decimals, and tabulated to the nearest integer unit, that being deemed sufficiently accurate for every practical case.

The numbers in the body of the tables give the total content in cubic yards, of a piece of earthwork 1 chain or 22 yards in length, corresponding to the central width and ratio of slopes given at the top of each table;—the tables are calculated for the several slopes of 1 to 1, 1½ to 1, and 2 to 1; and rules are given for reducing the numbers to any intermediate slopes.

Each of the principal or complete tables is divided into three parts, distinguished respectively by the Roman capitals A, B, and C, a division which, no doubt, has been adopted for the convenience of the page; part A. is of a triangular form, ranging from zero up to 30 feet, horizontally, vertically, and diagonally; part B. is in form of a rectangle, running horizontally from 30 to 60, and vertically from zero up to 30 feet; part C. is also in the form of a triangle, similar to part A., and carries the arguments horizontally, vertically, and diagonally from 30 feet up to 60, and thus completing the table. Now, if these three parts be supposed to be brought into immediate contact in their proper order, they will be found to constitute a large triangular table, having the arguments running along its sides, from zero to the utmost computed limit at 60 feet.

This arrangement ought to have been more particularly explained in the work itself, and we cannot help also thinking, that a little more of explanation and illustration, as regards the taking out and reducing the quantities, would have been an additional recommendation to the work. The subsidiary table, No. 4, is intended for generalizing the principals, by shewing what must be added to or subtracted from the tabulated quantities, to obtain the contents for any other width of central part, greater or less than that mentioned at the head of the tables. Thus generalized, the useful performance which has called forth these remarks, cannot fail to obtain a place in the office of every railroad engineer and contractor.

*The Tradesman's Book of Ornamental Designs,* Parts I., II., and III. Orr, Paternoster-row; Menzies, Edinburgh.

To every judicious endeavour to spread a knowledge of the principles of design amongst our operatives and others, to afford them at a cheap rate good examples, by which the eye may be schooled and the taste refined, we owe assistance and are at all times glad to give it.

The work now before us professes to have

this object in view, and might be made of considerable use: some of the designs, however, display such want of knowledge of the style in which they are supposed to be expressed, that they are more likely to confuse the student than to give him clear ideas of styles and enable him to master and retain their several characteristics. For example, the first plate in Part III, headed, "Serrill, &c., Gothic," has not the slightest pretence to be termed Gothic, either as to form or feeling; and the first plate in the second part "Iron Gate," has scarcely any more claim to the epithet Grecian, which is tacked to it. We would have our remark viewed by those interested in the production of the work, not as an expression of ill-nature, but as a reason for effecting improvement in succeeding parts.

Accompanying the designs is an "Essay on Ornamental Art" by Mr. Jas. Ballantyne, not yet sufficiently advanced to be judged of. The writer starts however with a great and important mistake when he says, "To talk of works of art growing upon our liking is absurd. Persons may and often do improve on acquaintance, but works of art never. The perception of beauty is inherent in the human mind, which is rapid in its combinations, and prompt and irrevocable in its decisions." Education in art, then, goes for nothing.

*The Law Relative to Building Societies; with Notes and Comments.* By C. FOAN, Barrister-at-Law. Hastings, Carey-street.

THIS is a cheap and portable edition of the Act regulating building societies, with fewer "notes and comments," however, than the subject requires and the title of the pamphlet leads one to expect. The chief point urged by the editor, and not a useless one, is the importance of obtaining respectable and responsible solicitors.

## Correspondence.

## STUDIOS FOR ARTISTS.

SIR,—I should rejoice to see some of the builders take the hint that was suggested in the *Art-Union Journal* a few months ago, viz., erect some rooms suitable for painters as well as sculptors. Those for the former might be erected over other buildings in town, and would do as well as the best, so that they had a private entrance; the size might be about 30 feet long, with corresponding width and height; some might be a little less than this, and some greater, according to the convenience of the spot. Those for the use of sculptors should be a little different from the former; they would require a gate-way in order to take in marble, clay, &c. The light is the primary object in rooms for this purpose, and it is not expected that they should be elaborately finished. That the speculation would be a profitable one is beyond doubt. If, however, builders should think to the contrary, let any one who wishes to give it a trial, advertise to artists in want of studios to come to any place they might choose, and after seeing their various designs, put their name down for such as they might fancy, naming the annual rent at the same time. They would then know how many they would have to erect, for which they would have tenants to step in as soon as finished.

I am, Sir, &c.,

W.

## SCARBRO' CHURCH COMPETITION.

SIR,—Having seen in your columns a notice respecting the proposed alterations at St. Mary's Church, Scarbro', which states that the sum of 7,000*l.* will be necessary to carry out the repairs and restorations according to the designs of Mr. Christian, the architect selected, whilst the advertisement limited the cost for competition designs to 3,500*l.*, I think you will agree with me when I say, that it was the bounden duty of the committee to reject the plans which did not comply with the terms of the advertisement; and if they do not, it will shew that the Scarbro' competition is another instance of the gross unfairness practised towards architects by committees, and for which, I believe, they are accountable.—I am, Sir, &c.,

A VICTIST.

## Miscellaneous.

**RUINOUS BUILDING.**—On Saturday last Mr. Stevens, the surveyor of the western district of the city of London, applied to the sitting magistrate, Guildhall, Sir J. Pirie, for his directions under an emergency not provided for by the new Buildings Act. He stated that a stack of chimneys belonging to some ruinous unoccupied premises in New-street-square, by the Queen's printing-office, had fallen, and from the appearance of the premises there was reason to apprehend the whole would fall in a few hours, to the danger of the public. He wanted, therefore, authority to immediately shore up and take down the premises. The Alderman of the ward, the overseers, and all the local authorities were out of town. He had resorted to the Mansion-house, but was not so fortunate as to meet with the Lord Mayor. He had done what the law required him, as district surveyor, to do, and from what he had put in motion he should obtain the necessary authority about Wednesday; but he wanted authority to do instantly what was necessary for the protection of the public. Sir J. Pirie said, he would take upon himself the responsibility of ordering him to do what the safety and convenience of the public required; and gave the surveyor a written authority to that effect.

**PURE WATER FOR A PENNY: PIPES AND CISTERNS PURGED BY EPSOM SALTS.**—A correspondent of the *Morning Post*, Mr. G. R. Skene, of Hampstead, describes a process which, if carefully conducted, cannot but be effectual in cheaply cleansing leaden pipes and cisterns. He ordered two ounces of Epsom salts or sulphate of magnesia to be mixed with some buckets of water through a dirty cistern, when forthwith he was told that "the cistern was turned into silver." In fact, the sulphuric acid had attacked the lead, and disengaged the whole of the brown scurf, although it might have rather been anticipated, on the modern chemical doctrine, that towards such an acid as the sulphuric, which has no peculiar preference to metals, magnesia would have had a strong enough attraction to prevent such an effect. Perhaps the acid was disided, however, between the two bases. Mr. Skene suggests the direct use of dilute sulphuric acid itself, and that, notice being given, the whole of the water-pipes [and cisterns?] in the metropolis might thus be cleansed in one day. Particular care, of course, is necessary afterwards in the cleansing away of the poisonous salt of lead thus formed in either way.—We may here too observe, what is not very generally known, that impure water itself may be cleansed by means of a small quantity of slom in powder, which precipitates all ordinary impurities in a few hours.

**LEICESTER SQUARE PUBLIC BATHS AND WASHHOUSES.**—On Tuesday the commissioners appointed to construct baths and wash-houses for the labouring classes commenced the erection of a spacious building for that purpose on a plot of ground granted by the Commissioners of Woods and Forests in Orange-street, Leicester-square. Two hundred private baths for both sexes, a spacious washing-room, with hut closets for drying, and steam apparatus for the supply of hot and cold water, are to be constructed, the estimated cost being 5,000*l.*, which will be raised by a rate on the inhabitants of St. Martin's-in-the-fields. The water for the use of the establishment will be obtained from the Artesian wells supplying Trafalgar-square, and it is anticipated that the concern will not only be self-supporting, but also yield a considerable profit to the parish.—*Morning Post*.

**THE WORKS AT WINDSOR CASTLE.**—A Windsor correspondent states, that various alterations and improvements are now in progress in and about the castle and the royal lodge at Frogmore, &c. One of the principal works at the castle is the construction of a new range of coal-vaults under the grand quadrangle, on which a great number of labourers are at work. A number of workmen and artisans are also engaged in preparing the Winchester Tower for the use of the master of the household. The Wardrobe Tower has just been converted, at considerable expense, into a dwelling-house for the private secretary to Prince Albert. The royal lodge at Frogmore is undergoing very extensive improvements and decorations.